

Academic Year: (2023 / 2024)

Review date: 05-05-2023

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: DIAZ PEREZ, MARIA PALOMA

Type: Electives ECTS Credits : 6.0

Year : 4 Semester :

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Programming
 Data structures and algorithms
 Files and Databases

OBJECTIVES

1. Data integration models: data store based models and virtual models
2. Data acquisition: Crawlers. Web data integration
3. NoSQL databases in data integration
4. Situation awareness and interpretation in the Big Data era
5. Visual analytics: history, definition and development process.
6. Principles of Human-Machine Interaction: Perception, cognitive aspects, semiotics and creativity
7. Interaction with visual interfaces
8. Temporal and geo-spatial data processing
9. Applications of visual analytics

DESCRIPTION OF CONTENTS: PROGRAMME

1. Context of Data Governance
2. Data integration models (datawarehouse and virtual models)
3. Heterogeneous Data. Mediated Schema. Schema Matching and Mapping.
4. Obtaining Data. Crawlers. Wrappers. Data Integration on the web.
5. Sensemaking and Situational Awareness in the Big Data Era
6. Visual Analytics: History, Definition and Building Process
7. Principles of Human Computer Interaction: Perception, Cognitive Aspects, Semiotics and Creativity
8. Interaction with Visual Interfaces
9. Geo-spatial and Temporal Data Processing
10. Deep Learning Models
11. Applications of Visual Analytics

% end-of-term-examination: 60

% of continuous assessment (assignments, laboratory, practicals...): 40